

## REMARKS

In accordance with the foregoing, FIG. 4 has been amended. Claims 12-30 are pending and under consideration.

## OBJECTIONS TO THE DRAWINGS

In the Office Action at page 2, the Examiner objected to FIG. 4. Corrections to FIG. 4 have been requested and replacement figures have been submitted herewith. Therefore, the outstanding drawing objections should be resolved.

Reconsideration and withdrawal of the outstanding objections to the drawings are respectfully requested.

## REJECTION UNDER 35 U.S.C. §102

In the Office Action at pages 3-5, claims 12, 13, and 15-20 were rejected under 35 U.S.C. §102 in view of U.S. Patent No. 5,282,250 to Dent, et al. This rejection is traversed and reconsideration is requested.

Applicants respectfully disagree with the Examiner's interpretation of Dent, et al. and submit that Dent, et al. teaches a method of carrying out an authentication check between a base station and a mobile station in a mobile radio system. Such a mobile radio system has an underlying problem in that a false base station can establish a connection to the mobile station, instead of the base station to which the mobile station has sent an authentication message. Thus, the mobile radio systems to which Dent, et al. refers have a significant security gap. Dent, et al. teaches that this security gap is solved by sending authentication messages from mobile stations to base stations AND sending an authentication message from a base station to a mobile station which has already sent an authentication message to a base station. According to Dent, et al., this ensures that the base station is not a false base station. The authentication messages of Dent, et al. are based on randomized data and PINs. Thus, the authentication system of Dent, et al. is bi-directional, and the underlying problem solved by the invention is a result of this bi-directional authentication.

In the method recited in independent claim 12, a first fault information item is formed "in the first communication subscriber using a fault detection data item of the first communication

subscriber and an information item relating to a random data item which has been transmitted to the first communication subscriber by a second communication subscriber in the communications network.” Applicants submit that Dent, et al., in contrast, teaches that a mobile station creates a signal Resp 1 from AUTH and RANDC signals, and transmits Resp 1, AUTH, and RANDC signals to the base station. The base station then computes its own Resp 1 value from the AUTH and RANDC signals and compares it to the transmitted Resp 1 value as an initial authentication step. See Dent, et al. at col. 2, lines 47-62. Thus, Applicants submit that first fault information item, as taught by Dent, et al., is formed from information of only the mobile station, and there is no “information item relating to a random data item which has been transmitted to the first communication subscriber by a second communication subscriber in the communications network.” For at least this reason, Applicants respectfully submit that independent claim 12 and independent claim 18, which recites a similar feature, and those claims depending either directly or indirectly therefrom patentably distinguish over the prior art.

Further, Applicants respectfully submit that Dent, et al. teaches that information such as PIN information is used for authentication. The present invention, in contrast, uses first and second fault information items for authentication purposes. For at least this reason, and those set forth above, Applicants respectfully submit that independent claims 12 and 18 and those claims depending therefrom patentably distinguish over the prior art.

## **REJECTIONS UNDER 35 U.S.C. §103**

In the Office Action at pages 6-7, dependent claim 14 was rejected under 35 U.S.C. §103 as unpatentable over Dent, et al. in view of U.S. Patent No. 5,642,401 to Yahagi. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claim 14 depends indirectly from independent claim 12, Applicants respectfully submit that Dent, et al. and Yahagi, alone or in combination, fail to teach or suggest the claimed invention for at least the same reasons as independent claim 12. Thus, Applicants submit that dependent claim 14 patentably distinguishes over the prior art and is in condition for allowance.

In the Office Action at pages 7-9, dependent claims 21-30 were rejected under 35 U.S.C. §103 as unpatentable over Dent, et al. in view of U.S. Patent No. 6,091,945 to Oka. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claims 21-30 depend, either directly or indirectly, from independent claim 18, Applicants respectfully submit that Dent, et al. and Yahagi, alone or in combination, fail to teach or suggest the claimed invention for at least the same reasons as independent claim 18. Thus, Applicants submit that dependent claims 21-30 patentably distinguish over the prior art and are in condition for allowance.

## CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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FIG 4 (PRIOR ART)

